

**Grace E. Kissling, Ph.D.**

Biostatistics Branch  
National Institute of Environmental Health Sciences  
P.O. Box 12233, Mail Drop A3-03  
Research Triangle Park, NC 27709

**EDUCATION:** B. S. in Applied Mathematics with High Honor, Georgia Institute of Technology, 1977.

Ph. D., Department of Biostatistics, University of North Carolina at Chapel Hill, 1981.

**HONORS:** Graduate fellowship on a National Research Service Award, 1977-80.  
Membership in the following honor societies:  
Phi Eta Sigma, 1974; Phi Kappa Phi, 1976; Pi Mu Epsilon, 1977;  
Tau Beta Sigma, 1974; Sigma Xi, 1984.  
National Merit Scholarship, 1973-77.  
Finalist for a Senior University Teaching Excellence Award, 1999.

**PROFESSIONAL  
EXPERIENCE:**

Staff Scientist, Biostatistics Branch, National Institute of Environmental Health Sciences, June 2003 – present.

Professor, Department of Mathematical Sciences, Division of Statistics, University of North Carolina at Greensboro, August 1999 – May 2003. (Assistant Professor, 1986-1990; Associate Professor, 1990-1999; Statistics Coordinator, 1998-2000, 2002-2003.)

Interim Head, Department of Mathematical Sciences, University of North Carolina at Greensboro, August 2000 - May 2001.

Adjunct Professor, Department of Public Health Education, University of North Carolina at Greensboro, August 2001 – May 2003.

Adjunct Associate Professor, Department of Anthropology, University of New Mexico, August 1996 – July 2002.

Adjunct Associate Professor, Department of Biostatistics, University of North Carolina at Chapel Hill, July 1992 - July 1997, July 1997 - July 2002.

Visiting Associate Professor, Division of Biostatistics and Epidemiology, Howard University Cancer Center, July 1990 - December 1990.

Assistant Professor, Department of Biometry and Genetics, Louisiana State University Medical Center, July 1981 - July 1986.

Health Statistician, National Institute for Occupational Safety and Health,  
May 1980 - December 1980.

### REFEREED PUBLICATIONS

Tracy RE, Toca VT, Kissling GE, Lopez C. Fibrous intimal thickening and atheronecrosis of the thoracic aorta: Some background for a mathematical theory. *Laboratory Investigation* 1983; 48(3):303-312.

Tracy RE, Toca VT, Lopez CR, Kissling GE, Devaney K. Fibrous intimal thickening and atheronecrosis of the thoracic aorta in coronary heart disease. *Laboratory Investigation* 1983; 48(3):313-322.

Wolf TM and Kissling GE. Type A behavior and achievement of freshman medical students. *Journal of Medical Education* 1983; 58:820-822.

Tracy RE, Kissling GE, Devaney KO, Lopez CR, Toca VT, Gandia M. The spatial dispersion of foam cells in the human thoracic aorta. *Laboratory Investigation* 1983; 49(6):693-701.

Kaufman HE, Varnell ED, Centifanto-Fitzgerald YM, De Clercq E, Kissling GE. Oral antiviral drugs in experimental herpes simplex keratitis. *Antimicrobial Agents and Chemotherapy* 1983; 24(6):888-891.

Yamaguchi T, Asbell PA, Ostrick M, Safir A, Kissling G, Kaufman HE. Endothelial damage in monkeys after anterior radial keratotomy performed with a diamond blade. *Archives of Ophthalmology* 1984; 102:765-769.

Yamaguchi T, Asbell PA, Ostrick M, Kissling GE, Safir A, Kaufman HE. Corticosteroid therapy after anterior radial keratotomy in primates. *American Journal of Ophthalmology* 1984; 97:215-220.

Bonney GE and Kissling GE. On the inverse of a patterned covariance matrix. *Journal of the American Statistical Association* 1984; 79(387):722-723.

Wolf TM and Kissling GE. Changes in lifestyle characteristics, health, and mood of freshman medical students. *Journal of Medical Education* 1984; 59:806-814.

Sanitato JJ, Asbell PA, Varnell ED, Kissling GE, Kaufman HE. Acyclovir in the treatment of herpetic stromal disease. *American Journal of Ophthalmology* 1984; 98:537-547.

Edwards JC, Euans DW, Kissling GE. Measuring attitude toward family medicine. *Family Medicine* 1985; vol. XVII(1):4-7.

Tracy RE, Devaney K, Kissling G. Characteristics of the plaque under a coronary thrombus. *Virchows Archiv, Pathol. Anat.* 1985; 405:411-427.

Tracy RE, Kissling GE, Devaney KO, Lopez CR, Gandia M. Spatial dispersion of spindle cells in the human thoracic aorta. *Laboratory Investigation* 1985; 52(1):85-92.

Hamano H, Kitano J, Mitsunaga S, Kojima S, Kissling GE. Adverse effects of contact lens wear in a large Japanese population. *The CLAO Journal* 1985; 11(2):141-147.

Tracy RE and Kissling GE. Age and fibroplasia as pre-conditions for atheronecrosis in the human thoracic aorta. *Archives of Pathology and Laboratory Medicine* 1985; 109:651-658.

Kandarakis A, Johnson TD, Ziegler LP, Kissling GE, Zimmerman TJ, Alpern L. The effect of nitrates on intraocular pressure in Sturge-Weber Syndrome. *Glaucoma* 1985; 7(3):120-126.

Kaufman HE, Varnell ED, Centifanto YM, Kissling GE. Effect of the herpes simplex virus genome on the response of infection to corticosteroids. *American Journal of Ophthalmology* 1985; 100(1):114-118.

Bonney GE and Kissling GE. Gram-Schmidt orthogonalization of multinormal variates: Applications in genetics. *Biometrical Journal* 1986; 28:417-425.

Wolf TM, Kissling GE and Burgess LA. Change in Type A behavior among medical students: A four-year longitudinal study. *Medical Education* 1986; 20(3):176-180.

Tracy RE, Kissling GE, Lopez CR, Gandia M. Histometric components of aortic atherosclerosis which vary or remain constant among eight populations. *Laboratory Investigation* 1986; 54(3):314-321.

Miller Jr. JM, Kissling GE, Korndorffer III FA, Brown HL, Gabert HA. A cross-sectional study of *in utero* growth of the above-average-sized fetus. *American Journal of Obstetrics and Gynecology* 1986; 155(5):1052-1055.

Wolf TM, Kissling GE, Burgess LA. Lifestyle characteristics during medical school: A four-year cross-sectional study. *Psychological Reports - Perceptual and Motor Skills* 1986; 59:179-189.

Edwards JC, Kissling GE, Plauché WC, Marier RL. Long-term evaluation of resident training in clinical teaching skills. *Journal of Medical Education* 1986; 61:967-970.

Tracy RE, Devaney K, Kissling G. Characteristics of the plaque under a coronary thrombus. *1986 Yearbook of Pathology and Clinical Pathology* 1986; p. 84-86.

Tracy RE, Kissling GE, Malcom GT, Devaney K. Sequestration hypothesis of atherosclerosis. *Virchows Archiv A* 1987; 411:425-434.

Wolf TM, Kissling GE, Burgess LA. Hassles and uplifts during the freshman year of medical school. *Psychological Reports - Perceptual and Motor Skills* 1987; 60:85-86.

Yazdani M, Kissling GE, Tran TH, Gottschalk SK, Laurent Jr. J, Schuth CR. Phenobarbital increases the theophylline requirement of premature infants being treated for apnea. *American Journal of Diseases of Children* 1987; 141:97-99.

Limberg MB, McCaa C, Kissling GE, Kaufman HE. Topical application of hyaluronic acid and chondroitin sulfate in the treatment of dry eyes. *American Journal of Ophthalmology* 1987; 103(2):194-197.

McDonald MB, Safir A, Waring GO, Schlichtemeier WR, Kissling GE, Kaufman HE. A preliminary study of epikeratophakia or penetrating keratoplasty for keratoconus. *American Journal of Ophthalmology* 1987; 103:467.

Miller Jr. JM, Korndorffer III FA, Kissling GE, Brown HL, Gabert HA. Recognition of the overgrown fetus: *In utero* ponderal indices. *American Journal of Perinatology* 1987; 4(2):86-89.

Brown HL, Miller Jr. JM, Gabert HA, Kissling G. Ultrasonic recognition of the small-for-gestation-age fetus. *Obstetrics and Gynecology* 1987; 69(4):631-635.

Tracy RE and Kissling GE. Age and fibroplasia as preconditions for atheronecrosis in human coronary arteries. *Archives of Pathology and Laboratory Medicine* 1987; 111:957-963.

Tracy RE, Kissling GE, Curtis MB. Smooth muscle cell-reticulin lamellar units of 13.2  $\mu\text{m}$  thickness composing the aortic intima. *Virchows Archiv A* 1987; 411:415-424.

Carter JM, Gebhardt BM, Kissling GE, Kaufman HE. The suppression of acute corneal inflammation by Bredinin. *Journal of Ocular Pharmacology* 1987; 3(3):191-197

Colin J, Chastel C, Kaufman HE, Kissling GE. Combination therapy for dendritic keratitis with Acyclovir and Vidarabine. *Journal of Ocular Pharmacology* 1987; 3:39-42.

Edwards JC, Euans DW, Kissling GE. Changes in student attitudes toward Family Medicine: A four-year study. *Family Medicine* 1988; 20(3):211-214.

Edwards JC, Kissling GE, Brannan JR, Plauché WC, Marier RL. Study of teaching residents how to teach. *Journal of Medical Education* 1988; 63:603-610.

Miller Jr. JM, Brown HL, Kissling GE, Gabert HA. The relationship of placental grade to fetal size and growth at term. *American Journal of Perinatology* 1988; 5(1):19-21.

Miller Jr. JM, Kissling GE, Brown HL, Korndorffer III FA, Gabert HA. Estimated fetal weight: Applicability to small- and large-for-gestational-age fetuses. *Journal of Clinical Ultrasound* 1988; 16:95-97.

Tracy RE and Kissling GE. Comparisons of human populations for histologic features of atherosclerosis: A summary of questions and methods for geographic studies. *Archives of Pathology and Laboratory Medicine* 1988; 112:1056-1065.

Edwards JC, Kissling GE, Plauché WC, Marier RL. Evaluation of a teaching skills improvement programme for residents. *Medical Education* 1988; 22:514-517.

Miller Jr. JM, Kissling GE, Brown HL, Nagel PM, Korndorffer III FA, Gabert HA. *In utero* growth of the large-for-menstrual-age fetus. *Journal of Clinical Ultrasound* 1989; 17:15-17.

Wolf TM, Elston RC, Kissling GE. Relationship of hassles, uplifts, and life events to psychological well-being of freshman medical students. *Behavioral Medicine* 1989; 15(1):37-45.

Tracy RE, Kissling GE, Oalman MC. Two variants of coronary atherosclerosis in six populations. *American Journal of Public Health* 1989; 79(5):575-581.

Tracy RE, Kissling GE, Gandia M, Reynolds C. Spatial dispersion of stainable lipid in frozen sections of human aorta. *Virchows Archiv A* 1989; 415:39-49.

Hall L, Vacc NA, Kissling G. Likelihood to use employee assistance programs: The effects of socio-demographic, social-psychological, socio-cultural, organizational, and community factors. *Journal of Employment Counseling* 1991; 28(2):63-73

Sandford MK, Kissling GE, Joubert PE. Neural tube defect etiology: New evidence concerning maternal hyperthermia, health and diet. *Developmental Medicine and Child Neurology* 1992; 34:661-675.

McCarthy P, Kissling G, Dirkers J. How many people need substance abuse treatment in North Carolina and how much does it cost? *North Carolina Medical Journal* 1993; 54(5):209-212.

Williams R, Laing E, Demenais F, Kissling G, Gause B, Chen V, Bonney G, Descriptive analysis of breast cancer in African-American women at Howard University Hospital, 1960-1987. *Journal of the National Medical Association* 1993; 85(11):828-834.

Laing AE, Demenais FM, Williams R, Kissling GE, Chen V, Bonney GE. Breast cancer risk factors in African American women: The Howard University Tumor Registry experience. *Journal of the National Medical Association* 1993; 85(12):931-939.

Sandford MK and Kissling GE. Multivariate analysis of elemental hair concentrations from a medieval Nubian population. *American Journal of Physical Anthropology* 1994; 95:41-52.

Cykert S, Kissling G, Layson R, Hansen C. Health insurance does not guarantee access to primary care: A national study of physicians' acceptance of publicly insured patients. *Journal of General Internal Medicine* 1995; 10:345-348.

Jud GD, Winkler DT, Kissling GE. Price spreads and residential housing market liquidity. *The Journal of Real Estate Finance and Economics* 1995; 11:251-260.

Williamson NC, Lucas SR, Miles BE, Kissling GE. Protectionist American businesspeople and their firms. *Management International Review* 1996; 36(2):167-182.

Brodie BR, Stuckey TD, Kissling G, Hansen CJ, Weintraub RA, Kelly TA. Importance of infarct-related artery patency for recovery of left ventricular function and late survival after primary angioplasty for acute myocardial infarction. *Journal of the American College of Cardiology* 1996; 28(2):319-325.

Rubino CM, Shaffer CL, Gal P, Ransom JL, Kissling GE. Postnatal pharmacologic prevention of intraventricular hemorrhage: Meta-analysis of phenobarbital and indomethacin. *Pediatric Nursing* 1997; 23(2):196-204

Brodie BR, Stuckey TD, Wall TC, Kissling G, Hansen CJ, Muncy DB, Weintraub RA, Kelly TA, Berry JJ, DeFranco AC. Importance of time to reperfusion for 30 day and late survival and recovery of left ventricular function after primary angioplasty for acute myocardial infarction. *Journal of the American College of Cardiology* 1998; 32(5):1312-1319.

Cykert S, Joines JD, Kissling G, Hansen CJ. Racial differences in patients' perceptions of debilitated health states. *Journal of General Internal Medicine* 1999; 14:217-222.

Williamson NC, Kissling G, Levinson C, Mangaldas S. Linking export competitiveness and import market targeting. *Journal of Global Competitiveness* 1999; 7(1):174-186.

Cykert S, Kissling G, Hansen CJ. Patient preferences regarding possible outcomes of lung resection: What outcomes should preoperative evaluations target? *Chest* 2000; 117:1551-1559.

Brodie BR, Stuckey TD, Hansen C, Kissling G, Muncy D. Influence of vessel size on early and late outcomes after primary angioplasty for acute myocardial infarction. *Journal of Invasive Cardiology* 2000; 12(1):13-19.

Gegick CG, Althimer MD, Kissling GE. Benefits of outcome analysis in diabetes management. *Endocrine Practice* 2000; 6(3):253-259.

Beeson SA, Kissling GE. Predicting success for baccalaureate graduates on the NCLEX-RN#2. *Journal of Professional Nursing* 2001; 17(3):121-127.

Miller CK, Edwards L, Kissling G, Sanville L. Evaluation of a theory-based nutrition intervention for older adults with diabetes mellitus. *Journal of the American Dietetic Association* 2002; 102(8):1069-1081.

Miller CK, Edwards L, Kissling G, Sanville L. Nutrition education improves metabolic outcomes among older adults with diabetes mellitus: Results from a randomized controlled trial. *Preventive Medicine* 2002; 34(2):252-259.

Miller CK, Russell T, Kissling G. Decision-making patterns for dietary supplement purchases among women ages 25-45 years. *Journal of the American Dietetic Association* 2003; 103(11):1523-1526.

Nelson-Gray RO, Huprich SK, Kissling GK, Ketchum K. A preliminary examination of Beck's cognitive theory of personality disorders in undergraduate analogues. *Personality and Individual Differences* 2004; 36:219-233.

Nwosu VC, Kissling GE, Trempus CS, Honeycutt H, French JE. Exposure of Tg.AC transgenic mice to benzene suppresses hematopoietic progenitor cells and alters gene expression in critical signaling pathways. *Toxicology and Applied Pharmacology* 2004; 196(1):37-46.

Ghanayem BI, Witt KL, El-Hadri L, Hoffler U, Kissling GE, Shelby MD, Bishop JB. Comparison of germ cell mutagenicity in male CYP2E1-null and wild-type mice treated with acrylamide: evidence supporting a glycidamide-mediated effect. *Biology of Reproduction* 2004; in press.

## **BOOK CHAPTERS**

Edwards JC, Kissling GE, Plauché WC, Marier RL. Developing and evaluating a teaching improvement program for residents. In: Edwards JC and Marier RL, eds. *Clinical Teaching for Medical Residents: Roles, Techniques, and Programs*. New York: Springer Publishing Company, 1987.

Sandford MK and Kissling GE. Chemical analyses of human hair: Anthropological applications. In: Sandford MK, ed. *Investigations of Ancient Tissues: Chemical Analyses in Anthropology*, New York: Gordon and Breach Science Publishers. 1993;131-166.

Sandford MK, Bogdan G, Kissling GE. Biological adaptation in the prehistoric Caribbean: Osteology and bioarchaeology of the Tutu site. In: Righter E, ed. *Human Adaptations at the Tutu Archaeological Village Site: A Multidisciplinary Case Study*. New York: Gordon and Breach Science Publishers, 2002; 209-229.

## **TECHNICAL REPORTS**

Kissling GE. A generalized model for the analysis of nonindependent events, *Institute of Statistics Mimeo Series* No. 1357, Chapel Hill, North Carolina, 1981.

Sandford MK, Bogdan G, Kissling GE. A view to the past: An investigation of the bioarchaeology and paleopathology at the Tutu Site, St. Thomas, United States Virgin Islands.

Site report submitted to the Senior Archaeologist, Government of the Virgin Islands, St. Thomas, 1997.

National Toxicology Program (2004, in press). Toxicology and carcinogenesis studies of 2,2-bis(bromomethyl)-1,3-propanediol, nitromethane, and 1,2,3-trichloropropane in guppies (*Poecilia reticulata*) and medaka (*Oryzias latipes*). Technical Report Series No. 528. NIH Publication No. 04-4464. U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, Research Triangle Park, NC.

### LETTER TO THE EDITOR

Brodie BR, Kissling G. Relationship between delay in performing direct coronary angioplasty and early clinical outcome in patients with acute myocardial infarction. [Letter to the Editor]. *Circulation* 2000; 102(4):E29-30.

### PAPERS UNDER REVIEW

Emmen JMA, Couse JF, Elmore SA, Kissling GE, Korach KS. Role of estrogen receptor  $\alpha$  and  $\beta$  in growth, rupture and luteinization of murine ovarian follicles *in vitro*. 2004; submitted.

Bebenik A, Carver GT, Kadyrov FA, Kissling GE, Drake JW. Processivity clamp gp45 and ssDNA-binding-protein gp32 modulate the fidelity of bacteriophage RB69 DNA polymerase in a sequence-specific manner. 2004; submitted.

Marsh VA, Young W, Dunaway K, Kissling G, Carlos R, Jones SM, Shockley DH, Weaver NL, Ransom JL, Gal P. Efficacy of topical anesthetics to reduce pain in premature infants during eye examinations for retinopathy of prematurity. 2004; submitted.

Gal P, Kissling G, Young W, Dunaway K, Marsh VA, Jones SM, Shockley DH, Weaver NL, Carlos R, Ransom JL. Efficacy of sucrose to reduce pain in premature infants during eye examinations for retinopathy of prematurity. 2004; submitted.

Moore AB, Flake GP, Swartz CD, Heartwell G, Cousins D, Haseman JK, Kissling GE, Sidawy MK, Dixon D. Influence of race, age and body mass index on the gross pathology of uterine fibroids. 2004; submitted.

Miller CK, Edwards L, Kissling G. Mediating factors associated with glycemic control among older adults with diabetes mellitus. 2003; submitted.

Vestal J, Kelter P, Kissling G, Atkins JM. What is the proper assessment tool for predicting who will succeed in mainstream general chemistry? 2003; submitted.

Natkin GL, Kissling G, Cooper B. Scenario graphs: A new method for illustrating survival analysis results. 2003; submitted.



## NONREFEREED PAPERS

Edwards JC, Marier RL, Kissling GE. Improving clinical teaching for residents: Workshops and seminars. *Professions Education Researcher Notes* 1985; 7(2):3-4.

Love WP, Kissling GE, Kilgariff L. Teaching limits of functions in college calculus classes. *Abstractions* 1988; p.5.

## PRESENTATIONS SINCE 2000

Lea SM, Kissling GE, O'Dell TJ, Lybanon M. Water depth determination from wave crest images, invited paper, International Symposium on Intelligent Signal Processing and Communication Systems, Nashville, TN, November 20-21, 2001. Published in *Proceedings of IEEE Symposium on Intelligent Signal Processing and Communication Systems*, Suthaharan S and Qui B, eds., 2001; 219 - 223.

Brodie BR, Stuckey T, Kissling G, Hansen C, VerSteeg D, Muncy D, Moore S, Gupta N, Pulsipher M. Electrocardiographic ST-segment resolution is an independent predictor of late cardiac survival after primary percutaneous coronary intervention for acute myocardial infarction, Annual Symposium on Transcatheter Cardiovascular Therapeutics, Washington, DC, September 24, 2002. Abstract in *American Journal of Cardiology* 90(Supplement 6A), 2002; 47H.

Miller CK, Edwards L, Kissling G. Mediating factors associated with glycemic control among older adults with diabetes mellitus. Abstract in *FASEB Journal* 2002; 16(4):A23, Part 1.

Brodie BR, Stuckey T, Kissling G, Hansen C, VerSteeg D, Muncy D, Moore S, Gupta N, Pulsipher M. Stenting and platelet glycoprotein IIb/IIIa inhibitors improve electrocardiographic ST-segment resolution after primary percutaneous coronary angioplasty for acute myocardial infarction, Abstract in *Journal of the American College of Cardiology* 2003; 41(6):392A, Supplement A.

Jiang X, Kissling GE. Using quadratic discriminant model to predict baccalaureate nursing students' passing rate on NCLEX-RN. The 69th Annual Meeting of the Psychometric Society, Monterey, CA, 2004.

## GRANTS SINCE 2000

### Internal grants and contracts

Image and reality: interdisciplinary research involving digital image data, (jointly with MK Sanford, RS Stine, SM Lea) submitted to the External Proposal Development Incentive Program, Provost's Office, 2003.

### External grants and contracts

Co-PI on Preparing students for science careers: Research experience and socialization through osteological analyses and scientific visualization of human skeletal material, (PI: MK Sandford) National Science Foundation, Research Experiences for Undergraduates Program, \$171,000, 1998-2001.

Co-PI on Computer science and mathematics scholarship program, (PI: P Duvall), National Science Foundation, \$220,000; 2000-2002. Renewal, \$275,000; 2002-2004.

Statistical consultant on Food purchase behavior among older adults with diabetes, (PI: C Miller) National Institutes of Health AREA, \$101,033; 1999-2001.

Statistical consultant on Knowledge and use of dietary supplements among women of childbearing age, (PI: C Miller) US Department of Agriculture, \$49,988; 1999-2001.

Co-PI on Correlates of local public health system performance, (PI: K Lovelace) Centers for Disease Control, \$724,172, approved, funding pending, 2001-2004.

### **COURSES TAUGHT**

Undergraduate/

Graduate      Course

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LSUMC:

U	Biometry 3115 - Basic Statistics
G	Biometry 250 - Multivariate Methods
G	Biometry 282 - Advanced Topics in Biometry (Multivariate Methods)
G	Biometry 283 - Advanced Topics in Probability and Estimation Theory
G	Biometry 284 - Advanced Topics in Significance and Hypothesis Testing
G	Biometry 296 - Statistical Consulting in the Health Sciences
G	Biometry 298 - Seminar in Biometry (Coordinator)
G	Biometry 300 - Thesis Research

UNCG:

U	Statistics 108 - Elementary Introduction to Probability and Statistics
U	Statistics 271W - Fundamental Concepts of Statistics (Writing Intensive)
U	Statistics 351 (343) - Probability
U	Statistics 352 - Statistical Inference
U&G	Statistics 573 - Theory of Linear Regression (Writing Intensive)
U&G	Statistics 574 - Theory of the Analysis of Variance (Writing Intensive)
U&G	Statistics 575 - Nonparametric Statistics

U&G Statistics 580 - Biostatistical Methods  
 U&G Statistics 593, 594 - Directed Study in Statistics  
 G Statistics 651 - Mathematical Statistics I  
 G Statistics 652 - Mathematical Statistics II  
 G Statistics 661 - Advanced Statistics in the Behavioral and Biological Sciences I  
 G Statistics 661L - Advanced Statistics Laboratory I  
 G Statistics 662 - Advanced Statistics in the Behavioral and Biological Sciences II  
 G Statistics 662L - Advanced Statistics Laboratory II  
 G Statistics 667 - Special Problems in Applied Statistics  
 G Statistics 673 - Statistical Linear Models I  
 G Statistics 674 - Statistical Linear Models II  
 G Statistics 675 - Experimental Design  
 G Statistics 676 - Sample Survey Methods  
 G Statistics 677 - Advanced Topics in Data Analysis and Quantitative Methods  
 G Mathematics 699 - Thesis Research  
 U Anthropology 501 - Selected Topics in Anthropology (team taught)  
 U Anthropology 502 - Selected Topics in Anthropology (team taught)  
 G Genetic Counseling 671 - Quantitative Risks in Practice  
 G Public Health Education 604 – Public Health Statistics

## **DIRECTION OF STUDENT RESEARCH**

### Undergraduate Honors Thesis Committee:

Marcello C. A preliminary study of degenerative joint disease at the Archaic period Barrett Site, McLean County, Kentucky. Department of Anthropology, UNCG (1998).

### Master's Theses Directed:

Prudhomme LA. Smoothing parameters in kernel density function estimation of continuous data. Department of Biometry and Genetics, LSUMC (1985).

Carnell LJ. Weighted least squares estimation of growth curve models for unequally spaced observations. Department of Mathematics, UNCG (1989).

Johnson RE. Hierarchical logistic regression models: Applications in the analyses of prosecutorial discretion in the U.S. Department of Mathematical Sciences, UNCG (1996).

Thornton G. Correlates of perceived health status in reproductive age women: Does intimate partner violence make a difference? Department of Mathematical Sciences (master's project), UNCG (2000).

Jiang X. Using quadratic discriminant model to predict baccalaureate nursing students' passing rate on NCLEX-RN. Department of Mathematical Sciences (master's project), UNCG (2003).

Master's Thesis Committees:

Fick AC. The estimation of pregnancy rates following microsurgery procedures for the treatment of infertility. Department of Biometry, LSUMC (1983).

Higginbotham S. Analysis of multiple observations of ordered categorical data. Department of Applied Statistics, Tulane University (1983).

Rosner VJ. Interlaboratory study of AATCC water resistant test methods. Department of Clothing and Textiles, UNCG (1989).

Westendorff M. Criminal homicide and sentencing in North Carolina: Garfinkel reconsidered. Department of Sociology, UNCG (1993).

Gaddis FD. A generalization of semidirect products of finite monoids. Department of Mathematical Sciences, UNCG (1995).

Rapoport I. Factors related to the quality of the statistical consulting experience. Department of Mathematical Sciences, UNCG (1996).

Howell TH. On the UD, MSD, and SD properties of three-word codes. Department of Mathematical Sciences, UNCG (1998).

Edwards L. Nutrition education of older adults with Type 2 diabetes mellitus improves health outcomes. Department of Nutrition and Food Service Systems, UNCG (2001).

Hatzia Apostolou T. Mathematics placement exam online. Department of Mathematical Sciences (master's project), UNCG (2001).

Morgan CK. On proper MSD and proper SD codes, Department of Mathematical Sciences, UNCG (2001).

Harmon R. A virtual tour of the third floor of the Bryan Building. Department of Mathematical Sciences (master's project), UNCG (2001).

Russell T. Knowledge and use of dietary supplements in women of childbearing age (25-45 years). Department of Nutrition and Food Service Systems, UNCG (2002).

Hinson B. 3D virtual walkthrough of the Mathematical Sciences Department with web interaction. Department of Mathematical Sciences (master's project), UNCG (2002).

Sells J. Mathematics placement test analyzer. Department of Mathematical Sciences (master's project). UNCG (2002).

Ma B. Nutritional status and depression in non-institutionalized older women living in Guilford County: A preliminary study. Department of Nutrition and Food Service Systems, UNCG (2002).

Cross C. Pathology of the maxillary sinus in the Barrett Site collection. Masters of Arts in Liberal Studies program, UNCG (2002).

Doctoral Dissertation Committees:

Cox EP. Sibling relationships: Their nature and association with other familial and peer indices. Department of Child Development and Family Relations, UNCG (1988).

McCarthy PV. Investigation of possible zinc and linoleic acid interactions in the rat. Department of Food, Nutrition, and Food Service Management, UNCG (1988).

Hall LG. Assessing the effects of socio-demographic, social-psychological, socio-cultural, organizational and community factors on the propensity of employees to utilize Employee Assistance Programs (EAPs). Department of Counseling and Specialized Educational Development, UNCG (1989).

Tomlinson T. Olfactory processing of spatial information in hamsters. Department of Psychology, UNCG (1989).

Robertson P. Differences in personality characteristics of middle- and upper-level women managers and differences in male and female same-level managers. Department of Counseling and Specialized Educational Development, UNCG (1990).

Vaughan H. Correlation of post abortion syndrome and antecedent variables. Department of Child Development and Family Relations, UNCG (1990).

Clifford S. Gender-based differences in high school employment: Is there differential socialization for work? Department of Child Development and Family Relations, UNCG (1991).

Richman H. Role of individual differences and learning in the development of avoidance among panickers. Department of Psychology, UNCG (1993).

Kelly V. Parental alcoholism and choice of coping strategy: A comparison of female children of alcoholics with female children of non-alcoholics. Department of Counseling and Specialized Educational Development, UNCG, (1993).

Denny E. Explicit and implicit memory for affectively toned material in depression. Department of Psychology, UNCG (1993).

Bowman A. Preservice elementary teachers' performance on tasks involving building, interpreting, and using linear mathematical models based on scientific data as a function of data collection activities. Department of Pedagogical Studies and Supervision, UNCG (1993).

Penny J. Using the area between two item response functions to index differential item functioning: A generalized approach. Department of Educational Administration, Higher Education, and Educational Research, UNCG (1994).

Sexton C. Sociogenesis of species-typical and species-atypical behavior in mallard ducklings. Department of Psychology, UNCG (1994).

Penta MQ. A comparison of the effectiveness of three commonly used scoring methods for prioritizing areas of need. Department of Educational Administration, Higher Education, and Educational Research, UNCG (1994).

Johnson RL. A theoretical and empirical investigation of factor analytically-based matching criteria in differential item functioning. Department of Educational Administration, Higher Education, and Educational Research, UNCG (1995).

Robinson C. The effects of a career course on the career maturity of undergraduates. Department of Counseling and Specialized Educational Development, UNCG (1995).

Cassady PM. Dimensions of perfectionism as vulnerability factors for depression in the narcissistic and obsessive compulsive personalities: A test of a specific diathesis-stress model. Department of Psychology, UNCG (1996).

Carnell L. Pre-service middle grades teachers' conceptions of conditional probability. Department of Pedagogical Studies and Supervision, UNCG (1997).

Huprich S. Depressive personality disorder: Empirical validity and object loss. Department of Psychology, UNCG (1997).

Harman P. Addressing the independence assumption through the development of a modified F test for educational contexts. Department of Educational Research Methodology, UNCG (1998).

Collins E. Toddler mastery behavior in child care settings: A contextual examination of temperamental and environmental correlates. Department of Human Development and Family Studies, UNCG (1998).

Boyles L. Exploration of a retention model for community college students. Department of Educational Research Methodology, UNCG (2000).

Aragon S. The latent structure of emergency room satisfaction: A structural equation modeling investigation. Department of Educational Research Methodology, UNCG (2000).

Rakita G. Social complexity, religious organization, and mortuary ritual in the Casas Grandes region of Chihuahua, Mexico. Department of Anthropology, University of New Mexico (2001), passed with distinction.

Tomeczak P. Prehistoric socio-economic relations and population organization in the lower Osmore Valley of southern Perú. Department of Anthropology, University of New Mexico (2001), passed with distinction.

Kelkar V. An algorithm to assess the multidimensional parallelism of test forms: An application to the Medical College Admission Test. Department of Educational Research Methodology, UNCG (2001).

Ritter S. Working with students affected by alcohol or other drug use: Knowledge and abilities needed by entry level school counselors. Department of Counseling and Educational Development, UNCG (2001).

Frye A. An examination of effects of decision accuracy of changes in exam length, exam construction, and scoring method in complex performance assessments. Department of Educational Research Methodology, UNCG (2001).

Hannum K. An investigation of the structural equivalence and aggregation strategies for ratings from a multi-source, 360-degree assessment of managerial strengths and developmental needs. Department of Educational Research Methodology, UNCG (2002).

Kepley H. AD/HD subtypes in adults: Differences in personality dimensions and comorbid internalizing disorders. Department of Psychology, UNCG (2002).

Ellis-Thomas D. An investigation of differential item functioning using sibtest for multi-categorically scored performance assessment. Department of Educational Research Methodology, UNCG (2002).

Paulson J. Causal pathways to psychological and social disturbance in adults with AD/HD: The mediational role of social skill. Department of Psychology, UNCG (2002).

Burroughs M. Technical specifications for the North Carolina Child Welfare pre-service training curriculum test of general knowledge. Department of Educational Research Methodology, UNCG (2002).

Clancy C. Coping with intrusive thoughts and worries in the lab: What coping strategies work best? Department of Psychology, UNCG (2003).

Brumfield T. As yet untitled. Department of Educational Research Methodology, UNCG (2005).

## **SERVICE**

### University:

Faculty Consultant, UNCG Statistical Consulting Center, 1986 - 2003.

Member, Mathematics Instructional Area Committee, UNCG, 1989-91, 1997-1999, 1999-2002 (Chair 2000-2002).

Member, Natural Science and Mathematics General Education Core Committee, UNCG, 2000-2001.

Member, Task Force on Restructuring Faculty Senate Committees, UNCG, 2000-2001.

Member, Admissions Policies Committee, UNCG, 1989-92.

Member, University Curriculum Committee, UNCG, 1989-91.

Member, Academic Research Data Archive Advisory Committee, UNCG, 1991 - 1996.

Chair, University Faculty Development Committee, UNCG, 1992-93, Member 1993-1995.

Member, Substance Abuse Committee, Student Affairs, UNCG, 1993-1996.

Member, Graduate Studies Committee, UNCG, 1995-96 (and Student Affairs Subcommittee).

Member, Graduate Studies Committee, UNCG, 1998-1999 (and Curriculum Subcommittee).

Member, Committee on Appointed and Elected Committees, UNCG, 1999-2000.

College/School:

Member, Grievance Committee, School of Nursing, LSUMC, 1982 and 1985.

Member, Undergraduate Studies Committee, College of Arts and Sciences, UNCG, 1989-91.

Member, Promotion and Tenure Committee, College of Arts and Sciences, UNCG, 1993-94.

Chair, Promotion and Tenure Committee, College of Arts and Sciences, UNCG, 1994-95.

Member, Mathematical Sciences Departmental Review Committee, College of Arts and Sciences, UNCG, 1995-96.

Member, Search Committee, Department of Public Health Education, School of Health and Human Performance, UNCG, 1997-98, 1998-99.

Chair-elect, College Assembly, College of Arts and Sciences, UNCG, 1998-99.

Member, Executive Committee, College of Arts and Sciences, UNCG, 1998-2001.



*Ex officio* member of the Curriculum and Teaching Committee, College of Arts and Sciences, UNCG, 1998-99.

Member of an *ad hoc* committee reviewing the Instrument of Governance, College of Arts and Sciences, UNCG, 1998-99.

Chair, College Assembly, College of Arts and Sciences, UNCG, 1999-2000.

*Ex officio* member of the Budget and Planning Committee, College of Arts and Sciences, UNCG, 1999-2000.

Member, Search Committee, Department of Geography, College of Arts and Sciences, UNCG, 2000-2001.

Past Chair, College Assembly, College of Arts and Sciences, UNCG, 2000-2001.

Member, Ph.D. Planning Committee, Department of Biology, College of Arts and Sciences, UNCG, 2001-2002.

Member, Search Committee, Department of Curriculum and Instruction, School of Education, UNCG, 2002-2003.

Chair, Outstanding Thesis/Master Production Award Committee, Graduate School, UNCG, 2002-2003.

Department:

Member, Curriculum Committee, Department of Biometry and Genetics, LSUMC, 1981-1986.

Member, Examinations Committee, Department of Biometry and Genetics, LSUMC, 1981-1986.

Member, *Ad hoc* committee reviewing upper division and graduate level offerings, Department of Mathematics, UNCG, 1986.

Member, *Ad hoc* committee reviewing requirements for Masters of Arts degree, Department of Mathematics, UNCG, 1987.

Member, Personnel Committee, Department of Mathematics, UNCG, 1988 - 90, 1992 - 94, 1998-2000, 2002-2003, Chair: 1989 - 90 and 1993 - 94.

Member, Scholarship Committee, Department of Mathematics, UNCG, 1991 - 1995.

Member, Undergraduate Programs Committee, Department of Mathematics, UNCG, 1991 - 1995.

Member, Graduate Review/Science Planning/Unit Planning Committee, Department of Mathematics, UNCG, 1993 - 1994.

Member, Workload Committee, Department of Mathematical Sciences, UNCG, 1995 - 1996.

Member, Graduate Programs Committee, Department of Mathematical Sciences, UNCG, 1995 - 2003.

Chair, STA 108 Textbook Selection Committee, Department of Mathematical Sciences, UNCG, 1996.

Member, Statistics Search Committee, Department of Mathematical Sciences, UNCG, 1988-1989, 1996-1997, 1997-1998, 2000-2001 (Affirmative Action Representative each time).

Member, Steering Committee for the Departmental Review, Department of Mathematical Sciences, UNCG, 1997-1998.

Coordinator, Division of Statistics, Department of Mathematical Sciences, UNCG, 1998 - 2000, 2002-2003.

Member, MAT 191, 292, 293, 394 Study Group, Department of Mathematical Sciences, UNCG, 1999.

Member, Senior Advisory Committee to the Head, UNCG, 2001-2003.

Member, Head Search Committee, UNCG, 2002-2003.

Professional:

Referee for: *Journal of the American Statistical Association*, *The American Statistician*, *Archives of Pathology and Laboratory Medicine*, *Journal of the American Medical Association*, *Journal of Counseling and Development*, *Journal of Statistical Education*, *Environmental Health Perspectives*.

Grant proposal reviewer for: Cooperative Grants Program of the U.S. Civilian Research and Development Foundation; Future SEEDS program of NC A&T.

Member, Membership Committee and Puzzle Contest Committee, Greensboro Chapter of Sigma Xi, 1992 - 1995.

Chair, Nominating Committee, Greensboro Chapter of Sigma Xi, 1993 - 1995.

Secretary, Greensboro Chapter of Sigma Xi, 1995 - 1996.

President, Greensboro Chapter of Sigma Xi, 1998 - 1999; President-elect, 1997 - 1998.

UNCG's representative to the Southern Regional Council on Statistics (SRCOS), 1998 - 2003.

## **OTHER PROFESSIONAL ACTIVITIES**

Statistical Consultant, Moses Cone Hospital, Greensboro, NC, 1987 - 2003.

Statistical Consultant, University Research Associates (formerly Creative Computing Consultants), Jamestown, NC, 1988 - 2003.

Guest Speaker, Collaborative Writing, graduate biostatistics consulting class, Department of Biostatistics, UNC-CH, 1991 - 1999 (each semester).

Expert witness in a Rowan County, NC murder trial, January, 1994.

Expert reviewer of drug testing legal briefs for a Florida court martial, March 1995.

Expert statistician in medical malpractice suit in Greensboro, NC, Fall, 1995 - Winter, 1996.

Expert witness in a federal credit card theft case, Greensboro, NC and Los Angeles, CA, Spring 1995 - Summer, 1996.

Instructor, Meta-analysis, Logistic regression, Survival analysis and outcomes research analysis, Topics in statistics for pharmacy research, summer short courses for pharmacists and neonatologists at Women's Hospital and Moses Cone Hospital, Greensboro, NC, Summers 1995 – 2002.